(126132306) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison, Lara Autry, Eric Koglin

05/07/2010 01:23 PM

01.Name:Allen C. Swift Puget Sound Division Manager
02.Organization:Pacific Northern Environmental Corp. dba CCS
03.Email:allens@pnecorp.com
04.Phone:1-360-957-2080
05.Type:technology
06.Briefdesc:Since Spill Response itself is a well-established industry, genetics and enzymology/bio-remediation can be simply "bolted-on" to existing spill response measures. CCS is supporting the cleanup efforts at this time with materials (boom 10Kft) by way of our current "BOA" contract with the USCG. We have effective procedures for bio-remediation treatment applications that can be implemented to augment existing cleanup efforts.
07.Perfcriteria:BIOREMEDIATION has effectively degraded the following contaminants:
Hydrocarbons with carbon chains ranging from C-5 to C-40
Benzene, xylene and toluene
TCE
PAH
PCB and other chlorinated compounds
Fuel oils
Fossil fuels - gasoline, diesel, aviation gas
Condensate - leakage from pipelines
Glycols
08.Cost:Most of the cost associated with traditional cleanup technologies is associated with physically removing and disposing of contaminated soils. Because engineered bio-remediation can be carried out in place by delivering nutrients to contaminated soils, it does not incur removal-disposal costs, with this new treatment method a substantial cost savings can be realized. A "Per Cubic Yard" or "Per Acre" for treatment unit rate can easily be established. Bio-remediation equipment and logistics
are simpler and less labor intensive, costs
are typically much lower than other traditional cleanup methods. Because bioremediation methods minimize site disturbance compared with conventional cleanup technologies, cleanup costs can be substantially reduced.
09.Throughput:1 When you determine the area to be cleaned we will figure out the volume of Bio Reclaim that we will require, we would apply a large quantity to area to achieve a maximum cleanup factor.
  (2) We will have manpower and equip/materials mobilized to the site. As we require product to spray we will apply with water. We will need open top 55 gallon drums, bio reclaim comes in a bladder that we put in drum, mix, allow 24 ours then spray on within 24-36 hours. We will be putting the mixed bio product into a tote and adding the final ingredients just before we spray. It is best to mix in early mornings the amount that will be sprayed every day, eg Tuesday product sprayed Wednesday and so forth.
  (3) In this application, at this point I think it will be an advantage to spray the volume 50%, then 3-4 days later spray the remaning 50%. Of course that is the thoughts at this point without seeing the site. We may have to apply all at one time which will still work fine, we will decide this at site. Application is best sprayed on with a very fine misting, when possible. In a water application we have used a boat with an agriculture field type sprayer works well, 200 gallon tank and a 20 foot boom was the type we used.We used a quad 4x4 sprayer on some occasions as well, this works on hilly, rocky terrain.

(4) We will stay on site to monitor progress, this ensures that the site isn't at risk of a drastic change that we don't respond to, we will only need a minimal amount of personnel at that point. We are positive that we will achieve results that will encourage the EPA to approve this method with on-going clean up. This chemistry works, we just need to apply properly and the results are remarkable. The test sites we have done in the U.S and Canada have been on very long chain hydrocarbon crude oil, the gulf crude is a light sweet crude and we will have quick degradation, we're certain of that.

10.fieldtested:yes
11.Fieldtestingdesc:This technology was utilized/approved/documented and overseen for a cleanup action project by the Washington State Dept. of Ecology. Heavy saturated hydrocarbon contaminated soil was treated with this new Bio-Rem technique/method/system and full remedy was obtained in 45 days. This treatment method applications can be applied in both soil and water. This method is a non-evasive cleanup approach in areas of high sensitivity within inland water ways, estuaries and tidal influenced beach areas/land. There are no residual harmful after effects. Most of the cost associated with traditional cleanup technologies is associated with physically removing and disposing of contaminated soils. Because engineered bioremediation can be carried out in place by delivering nutrients to contaminated soils, it does not incur removal-disposal costs. Salt marshes and other sensitive environments, even more than beaches, may be further damaged by intrusive mechanical technologies
. Reducing environmental stress is key to utilizing bio-remediation methods which minimizes site/area disturbance. Compared with conventional cleanup technologies, post-cleanup costs can be substantially reduced.
button:Send

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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(133005105) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/14/2010 12:51 AM

01.Name:David Loughnan
02.Organization:Your Earth Pacific Pty Ltd
03.Email:david@yourearthpacific.com
04.Phone:US agent (917) 975 7017
05.Type:technology, system
06.Briefdesc:Harmless, non toxic, environmentally safe Hydrocarbon digesting bacteria which is best suited for shallow water protection of sensitive marine habitats. It is NOT a dispersant, it is a Hydrocabon digester applied by spraying onto shoreline and beach contamination, into mangrove and marsh type areas where physical removal of oil contamination is either very difficult or not possible. Can also be used to remediate pre collected sand and soil where Hydrocarbons are present. Would also be ideal to treat Hydrocarbon waste which is present after contaminated containment booms are cleaned in readiness for redeployment. Can be applied to salt water, fresh water and on land Hydrocarbon contamination.
07.Perfcriteria:Certified Laboratory water and soil testing for TPH reductions to meet or exceed US EPA standards.
08.Cost:from $0.10 - $0.15 US cents per CUBIC FOOT pending geographic location of formulation.
09.Throughput:As much as is required
10.fieldtested:yes
11.Fieldtestingdesc:Tests from "ALS', a world wide accredited testing laboratory, on Hydrocarbon removal from soil at a bituman plant and from a decommissioned railway repair yard
button:Send

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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(131170842) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/12/2010 05:08 PM

01.Name:Pamela Covella and Mac McCullough
02.Organization:RAM Environmental Technologies, Inc.
03.Email:pamela@covellalaw.com and mac@ramsorb.com
04.Phone:48-797-7024 or 209-969-0708
05.Type:technology
06.Briefdesc:(ALABAMA COMPANY RAM Environmental Technologies, Inc.). Technology "Ramsorb" is a hydrocarbon absorbent and bioremediation product with 17-year history of use in hundreds of responses to emergency oil spills. U.S. patented, 100% cellulose, contains naturally occurring bacteria and completely encapsulates and bioremediates oil. After encapsulation bacteria "consumes" oil and is then fully biodegradable on site. Ramsorb is applied in soils, sand, swamps and marshlands. After oil is encapsulated, product is usually left on site to naturally biodegrade, usually in 3 to 6 months, or it can be dug up and hauled away to biodegrade off site.
07.Perfcriteria:Ramsorbâ€™s 17-year performance criteria in hundreds of projects are reduction from hydrocarbon contamination at times over 100,000-300,000 ppm, to in most cases reduction to below 100 ppm. Ramsorb is OSHA certified and has received EPA and state agency approvals on prior projects with several state Army National Guards, State DOTs, US Army Corp of Engineers, NASA, US Air Force and private industries. Ramsorb was used in the Genesis Oil Company pipeline spill in Mississippi in 1999, then the largest pipeline spill in US history. Distinguishable from any other "adsorbents" on the market in that it encapsulates, bioremediates with bacteria, is biodegradeable and fully non-toxic. References and case histories available.
08.Cost:Full retail price is $2.11, however significant quantity discounts availagble for large volume orders. Typical protocol of amounts required:
Â
1 bag (i.e.) 30 lb./cu. yd. per up to 40,000 ppm of petroleum contamination
Â
Metric application is 18.1 kg/cu. meter (i.e. 1.33 bags)
Â
10,000 sq. meter area (1 hectare) requires approximately:

1/3 meter soil depth = Â Â 60,000 kg (3 containers)
2/3 meter soil depth = 120,000 kg (6 containers)
1 meter soil depth = 181,000 kg (9.5 containers)
Â
*Based on case histories following recommended protocol, labor and equipment use. Quantities may vary according to climate, soil and terrain conditions.

09.Throughput:RAM currently has 320 tons of Ramsorb available for immediate shipment from its' manufacturing plant in Jackson Mississippi and thereafter can produce 100+ tons per week.
10.fieldtested:yes
11.Fieldtestingdesc:In Ramsorb's 17-year history of use it has received EPA approval and state environmental agency approvals on prior projects with several state Army National Guards, State DOTs, US Army Corp of Engineers, NASA, US Air Force and many private industries. Ramsorb was used in the Genesis Oil Company pipeline spill in Mississippi in 1999, then the largest pipeline spill in US history (320,000 gallons, 30 mile spill). In the Genesis spill and all other projects, Ramsorb was underwent intermitent ongoing field

soil tests which in all cases revealed successful remediation reduction to under 100 ppm, with Ramsorb being left in the ground for complete biodegradation and soil-enhancement. Ramsorb is OSHA certified and has undergone toxicity tests under "National Revised Standard Dispersant Toxicity Tests."
button:Send

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TSSMS: emergenc
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(131142431) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/12/2010 02:24 PM

01.Name:Matthew Fidler
02.Organization:Yodock Wall Company
03.Email:mfidler@yodock.com
04.Phone:570-242-2578
05.Type:system
06.Briefdesc:beachfront, low water, and marsh barrier
07.Perfcriteria:can be placed to block oil/water mixtures at varying water levels.
08.Cost:Can block one mile (5280 feet) for $208K. 100% reusable after the situation is mitigated.
09.Throughput:www.yodock.com
10.fieldtested:yes
11.Fieldtestingdesc:in various uses. South FL for protection on the beach. USACE (Vicksburg facility) for wave mitigation. Several others.
button:Send

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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(130110206) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/11/2010 11:13 AM

01.Name:Kimberly Shannon
02.Organization:Kleinfelder
03.Email:kshannon@kleinfelder.com
04.Phone:918.627.6161
05.Type:process
06.Briefdesc:When and if the oil infiltrates the coast marshes and wetlands in great quantity, burn the oil off as it enters the vegetation but before it settles into the sediments. Under the right conditions (low wind in particular) I propose that the exposed vegetation (if in close proximity) would burn and help carry the flames to any patches of oil within the wetland. The vegetation should regrow and the oil could be eliminated.
07.Perfcriteria:Burned area would approximate the area of oil eliminated
08.Cost:man power; not sure of $$ cost
09.Throughput:
10.fieldtested:no
11.Fieldtestingdesc:
button:Send

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Browser: Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1; .NET CLR 1.1.4322; .NET CLR 2.0.50727; InfoPath.1; WinNT-PAI 14.07.2009; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729; WinNT-EVI 11.03.2010)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(130100203) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/11/2010 10:02 AM

01.Name:Karen Kieffer
02.Organization:Philen Construction -Erosion Control
03.Email:kakakieffer@juno.com
04.Phone:7046221233
05.Type:system
06.Briefdesc:we are an environmental erosion control company in the south east region. We have access to large quantities of straw to absorb the oil around beaches, marshes, etc.....please feel free to contact me for delivery and install details. We are here to help.
07.Perfcriteria:
08.Cost:shipping and handle will depend on destination from the carolinas.
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:a few times, it is primitive yes, but effective. the article I read back in the 70's also stated that the oil can be squeezed from the straw and recycled. WIN WIN
button:Send

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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
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(126033930) Oil Spill Technology Solution

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t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison, Lara Autry, Eric Koglin

05/07/2010 03:39 AM

01.Name:Danny Lamonte
02.Organization:Gomez Pine Straw
03.Email:lamont96923@aol.com
04.Phone:985-630-4703
05.Type:process
06.Briefdesc:Gomez Pine Straw
P.O. Box 1125
Mandeville, La. 70470
Ph (985) 264-3567
Fax (985) 626-1404
E-mail:gomezpinestraw@yahoo.com
Web-Site: www.gomezpinestrawllc.com

Attention: Purchasing Department

Ref: Gulf of Mexico Oil Spill
Clean Up Operations

I would like to introduce our company to you. We have been in the pine straw business for the last thirteen years with a reputation of representing a quality product with an unmatched record of reliable, on time delivery. Gomez Pine Straw is a Louisiana minority owned and operated small business. Our products include various types of straw. We realize that due to the enormous size of the oil spill, all available resources will be necessary to contain and ensure a speedy, environmentally safe clean up and restoration of our coastlines and waterways. We at Gomez Pine Straw are available for immediate delivery and installation if needed of an unlimited supply of straw to enhance this cleanup effort. Our product can be drop shipped to any land based facility or containerized for loading on barges for transfer to any beaches, islands, marshes or waterways.

We feel that the ideal product would be our pine straw bale which measures approximately 14â€□ x 16â€□ x 27â€□ in size and weighs about twenty pounds. This size can be handled easily by anyone in the field at the rate of two bales at a time. Working conditions in the Southern Gulf Coast Marshes hamper the use of larger, heavier bales in the field. The bales can simply be attached to each other creating an unlimited length to accommodate any size line of defense. More importantly, the bales can easily be opened and spread three inches thick covering approximately forty Square feet to block and absorb where other oil booms and barriers cannot be utilized forming not only a secure barrier but also an excellent absorbent of oil products.

Please review the attachment or visit our Web Site which details all the environmental benefits of using our product. We are available twenty four hours a day, seven days a week and can also be reached by cell phone number (985) 264-3567 or via email, gomezpinestraw@yahoo.com. We look forward in assisting in the clean up of this devastating disaster.

Sincerely;

George Gomez

Why Pine straw?

Its Nature's Perfect Ground cover.

If you're looking for a superior bedding material for your trees and plants consider Pine Straw. It is a natural product, high in nitrogen, that decomposes and makes a great fertilizer for plants and shrubs. A Pine Straw covering adds beauty to your landscape while deterring weeds. It is insect and rodent free, adheres well to slopes and will not wash away during heavy rain. Pine Straw is ecology-minded and easy to work with. It does not have to be removed simply place fresh straw on top of existing straw to revitalize the color.

Pine Straw is widely used by Landscapers, Nurseries, Golf Courses, Municipalities, Parks, and Home Owners. Pine Straw's popularity continues to grow, the word is spreading that it is easy to use, has beautiful color and makes a great fertilizer. It is easy to see why pine straw has become such a sought after product for the finishing touch on landscape jobs. Pine straw keeps sprawling vegetables such as squash, melons, and strawberries from forming mildew, mold, or developing rot.

According to statistics, there are many reasons for using pine straw as a mulch. It enhances the beauty of any landscape by providing a cover of uniform color that is neutral and non-detracting to plants. Pine straw conserves soil moisture by reducing water evaporation from the soil. Weed and grass problems are fewer when the straw is applied deep enough to smother unwanted plants and prevent undesirable seed germination. Because pine needles interlock, it keeps wind and rain from washing or blowing away the topsoil. Soil crusting problems are prevented, and moisture is able to reach the roots of plants. It also insulates the soil.

Unlike other dry organic mulches such as pine bark, leaves, grass clippings, and peat moss, pine straw helps provide favorable growing conditions and stimulates healthy plant development because it:

Insulates tender roots from temperature extremes keeping the soil warm during cold spells and cool during warm spells.

Conserves soil moisture by reducing water evaporation rates and moisture loss.

Encourages water infiltration into the soil and reduces runoff.

Eliminates erosion caused by wind and rain-splash impact.

Protects against soil compaction by reducing the rain impact directly on the surface.

Aids in promoting favorable soil tilth for healthy root growth.

07.Perfcriteria:
08.Cost:
09.Throughput:
11.Fieldtestingdesc:
button:Send

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(123174357) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t o : Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison

05/04/2010 05:44 PM

01.Name:Darci Ackerman
02.Organization:Heritage Environmental Services, LLC
03.Email:darci.ackerman@heritage-enviro.com
04.Phone:317-390-3122
05.Type:technology
06.Briefdesc:Sorbent product that physically (versus chemically) bonds with oil to form a cohesive mass. The product works like a sorbent and have the added advantage of preventing the "dripping sponge" effect that is common of most sorbents. The material is buoyant, does not react with water, ard is relatevely inert to fauna such as birds uless ingested in large amounts.
07.Perfcriteria:The product was tested in PERF 92-16 and 94-14 and were found to perform well in comparison to other solidifier products. this material is considered a sorbent by EPA and documentation to this can be provided.
08.Cost:$3.70/lb but can discuss as we believe this product is second to none in mitigating oil contamination in marsh and shoreline applications.
09.Throughput:32,000 lbs can be produced a day and can treat up to 320,000 lbs of oil (this does not include water as it is hydrophobic).
10.fieldtested:yes
11.Fieldtestingdesc:PERF projects 92-16 and 94-14. More information can be provided as requested.
button:Send

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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
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(123174834) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison 05/04/2010 05:48 PM

01.Name:Scott Newcomb
02.Organization:Advanced BioCatalytics Corp.
03.Email:info@abiocat.com
04.Phone:949-442-0880
05.Type:system
06.Briefdesc:ABC's AccellÂ® is a waterborne dispersant containing synthetic and biosurfactants, the latter derived from baker yeast fermentation. It efficiently reduces interfacial tension between oil and aqueous phase and facilitates biodegradation of petrol hydrocarbons (and other hydrophobic contaminants) by natural microorganisms. It is certified by US Coast Guard (2007) and International Maritime Organisation (2009) for cleaning of chemical cargo tanks, and by the National Sanitary Foundation (2007) for applications with potable water (uo to 60 ppm). Essentially the same product (although under previously used brand name of SoilKlean) has been accepted by the Florida State Department of Environmental Protection (2000) as a product for both in situ and ex situ bioremediation of soil and groundwater at petroleum contaminated sites in Florida. It iscontinuously used for over 11 years to treat the industrial effluent from a major food processing plant, and for over 2 years
in chemical cargo tank cleaning, as well as in municipal waste water treatment and cleaning. The material can be applied by spray over surface of contaminated water, or beaches, or marshes. Non-toxicity for fish, other aquatic life, let alone mammals, and biodegradability, all certified by independent licensed organizations, makes it environmentally friendly. Supporting documentatation is being e-mailed to Koglin.Eric@epamail.epa.gov
07.Perfcriteria:Criteria used in assessments of the efficiency of Accell included:
- increased growth of heterotrophic bacteria in natural marine water (over 100 fold in 24 hours in the presence of 40 ppm Accell, as compared to control);
- increased dissolved oxygen, decreased biological oxygen demand, and decreased amount of solid sludge in waste water;
-decreased content of total and aromatic hydrocarbons in soil bio-remediation tests;
- standard methanol cleaning assessments in chemical cargo tank loaded with diesel fuel, petrol oil, vegetable oils, and other comparable materials.

08.Cost:approx $7 per acre per day for aquatic surface,
approx. $7 per acre per week for soil/marsh surface
09.Throughput:Production line capacity is 20,000 gal per day. There are storages located in Gulf states.
10.fieldtested:yes
11.Fieldtestingdesc:The material has been extensively tested and/or routinely applied in remediation of soil contaminated with hydrocarbons, in processing of waste water in industrial and municipal waste water treatment plants, in processing hydrocarbon contaminants in septic tanks, in degreasing sewer lines, cleaning of highly soiled food processing equipment, municipal cleaning and alike. It has been tested, with positive results, in bioremediation of petrol oil refinery waste waters heavily loaded with hydrocarbons.
button:Send

(123232049) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison

05/04/2010 11:20 PM

01.Name:Dale Barnes, Project Coordinator
02.Organization:BioWorld Products, Inc - Visalia California USA
03.Email:mail@BioWorldUSA.com
04.Phone:559.651.2042 or 559.732.6598
05.Type:technology, process, system
06.Briefdesc:BioWorld has prepared for "Large Scale" oil spill cleanup since the Prestige in Spain, Katrina, South Korea, San Francisco and others. We have updated our S.O.P for product production ramp up, HAZWOPER trained staff-management, transportation and general product application techniques. Our innovative formulations, known as the BioWorld Advanced Bioremediation Technology, developed specifically for oil spill cleanup began in our research into soil microbiology and the rapid reproduction of indigenous microbes for crop production during our 20 plus years of experience. Improvements in the BioWorld Bioenhancement formulations proved effective when combined with the BioWorld Hydrocarbon Degrading Microbes in degrading all types of oil. The total formulation literally creates a microbial reproduction factory in the contaminated crude oil site and rapidly degrading hydrocarbons as indicated by the outstanding laboratory results - 97% reduction alkanes; 88% reduction of aromatics. See EPA-NCP listing - #B59.
http://www.epa.gov/oem/content/ncp/products/bioworld.htm.
07.Perfcriteria:Our attack of the current BP Horizon spill would consist of applying the BioWorld Advanced Bioremediation products at the leading edge between the spill and the shore. Our primary goal is to treat the oil in the open water. However, the BioWorld is also extremely effective if needed in the marshes, wetlands, beaches, sands, rocks, vessels. piers, docks and others. Our BioWorld scientists have also developed methods of using our Advanced Bioremediation products to clean up the boats, booms, equipment, etc. BioWorld Advanced Bioremediation Technology is for all types of petroleum hydrocarbons, both ringed and straight chain with 97% reduction of crude oil per EPA-certified independent laboratory. Projects available upon request such as 4000 yards Bunker "C" from 6000ppm to 100ppm on desert site.
08.Cost:The cost will vary greatly because of the factors that dictate product performance and limitations such as scale of application, viscosity of oil, and environmental conditions which influence exponential growth of the microbes from BioWorld Bioremediation products. Basically, the BioWorld Microbes will thrive in the crude oil as their primary food source while creating enzymes to assist with the breakdown in the process. Therefore, each surface acre of water applied with the BioWorld Products could have 5, 10, 100 or maybe even 1000 acres of water surface area cleaned up as a result of the BioWorld Advanced Bioremediation products exponential reproduction capabilities. The BioWorld Products need to be applied to this spill ASAP so the full potential of the technology can be evaluated. Cost examples as follows: Open Water - $2,750 per surface acre of BioWorld product applied once. Keep in mind that if 10 acres are cleaned with 1 acre treated with the BioWorld product
, then the real cost is $270 per surface acre of water. Conversely, the wetlands, marshes and beach will require $2,750 per acre with probable multiple applications needed. These estimates are for the BioWorld Products only - applications can be with the C-130 or other available aircraft and by barge or ship. Our engineering, labor, equipment, shipping, etc. costs are not included in these estimates but are available upon request.
09.Throughput:BioWorld has the S.O.P ready for a "Large Spill" and is capable

of ramping up production in 5 to 7 days. The initial quantity of product will cover approximately 450 applied surface acres per day - 5 to 6 truckloads. (Keep in mind that the reproduction on site could realistically affect 2250 to 9000 surface acres cleaned of oil - light sheen to heavy crude. Our estimated full capacity in 3-4 weeks is about 1000 surface acres per day of production - 10 to 12 truckloads. Costs per truckload are available upon request. --- We have been preparing for large oil spills over the last 20 years and we have the knowledge, technology and products to assist you in your cleanup efforts.We are also GSA listed as a Woman Owned Small Business and have a SDVBE, Minority, Small Business as a distributor. We really appreciate your time in review of our information.
10.fieldtested:yes
11.Fieldtestingdesc:Our Advanced Bioremediation Technology has been used in numerous types of waste, including crude oil, for about 20 years. (ISA4031) Please see our website for a few of the projects- www.adbio.com and new site being built www.BioWorldUSA.com
button:Send

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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
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idaemon.rtpnc.epa.gov

(122103917) Oil Spill Technology Solution

t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison

05/03/2010 10:39 AM

01.Name:Ken Davis
02.Organization:Pensacola Environmental Services
03.Email:davis-pes@cox.net
04.Phone:850-380-2131
05.Type:process
06.Briefdesc:Utilize a USDA perferred sorbent (peat moss) as a second line of defense near the shores to protect aquatic areas. Booms will not stop or capture all of the oil entering the estuaries. This tool has been utilized on past oil spills with great success. It absorbs the oil and "locks it in", reduces leaching at provides for easier cleanup of the shorelines and marsh areas. I presently have a plan that could be inplemented within 24 hours which would put watercraft despensing the sorbent on oil both offshore and within the estuaries. This plan provides personnel (mostly local fisherman with OSHA training), vessels, despensing equipment, and sorbent product.
07.Perfcriteria:1 pound of processed peat moss will absorb 1 gallon of oil. Cost for process peat moss is $.50 per pound. This product has been utilized in the past on surface water oil spills with great success.
08.Cost:$0.50 per gallon of oil for absorbent product does not include personnel management and equipment costs.
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:USDA Preferred Sorbent List, Registerd in the Federal Supply List, Widely used by oil spill cleanup contractors.
button:Send

This information is for tracking purposes only.
Submitting script: /cgi-bin/mail.cgi
Submitting host: ip68-228-25-45.pn.at.cox.net (68.228.25.45)
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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(121000537) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl 05/02/2010 12:05 AM

01.Name:Bianca Beadling
02.Organization:
03.Email:bianca.beadling@gmail.com
04.Phone:412-892-8465
05.Type:process
06.Briefdesc:cleanup process- using feathers and down to soak up oil

A commenter on a Greenpeace article, named Anna, submitted this solution: FEATHERS/DOWN for clean up. It has been proven to work by millions of live birds in the past. Easy to implement and you can source the material locally. Super light to transport. The feathers have tiny filaments which get coated with oil. The feathers, once coated, form into clumps and contain the oil and they float. The clumps congregate into larger formations which can be collected. You can drop the clean feathers directly on the affected areas, even in the marshy areas. Waves and wind will help coat the feathers and absorb the oil. The more agitation the better. Volunteers can also source feathers and use directly in the affected areas and marshes.

http://www.youtube.com/watch?v=Sk6lTQnAvvs
http://www.youtube.com/watch?v=bqZQHBctT70
07.Perfcriteria:reduction in contaminant concentration
08.Cost:No idea. Get them from the poultry farmers for free.
09.Throughput:
11.Fieldtestingdesc:
button:Send

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Submitting script: /cgi-bin/mail.cgi
Submitting host: host202.201-253-120.telecom.net.ar (201.253.120.202)
Browser: Mozilla/5.0 (Macintosh; U; Intel Mac OS X 10_5_8; en-us) AppleWebKit/531.22.7 (KHTML, like Gecko) Version/4.0.5 Safari/531.22.7
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(121060747) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl — 05/02/2010 06:07 AM

01.Name:Brent Brasher
02.Organization:KenGro Corporation
03.Email:bbrasher@kengro.com
04.Phone:6626472456
05.Type:technology, process, system
06.Briefdesc:Granular absorbent/bioremediation agent, All natural product - will absorb oil on water(hydrophobic) non leaching so if it hits land will not release oil - natural occuring microbes breakdown hydrocarbons This would also be less invasive on sensitive marsh areas as it could be applied by air
07.Perfcriteria:Any hydrocarbon based products- university and private lab results www.kengro.com
08.Cost:n/a
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:This product has been used on land based spills in US since 1994 and in other countries on water based spills
button:Send

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Submitting script: /cgi-bin/mail.cgi
Submitting host: (96.19.238.253)
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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(121173122) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl

05/02/2010 05:31 PM

01.Name:Stanley J. Schultz
02.Organization:Schultz & Summers Engineering, Inc.
03.Email:sjschultz@schultzandsummers.com
04.Phone:573-776-8736
05.Type:technology, process, system
06.Briefdesc:a clean-up process that enhances the biodegrading of organic hydrocarbons. It can be applied through a hydroseeder along the contaminated marsh, rocks, or sandy beaches and works OK in salty water.
07.Perfcriteria:apply up to 1 oz. of mixed product per square foot of contaminated area. Improvement can be measured in 8-24 hours.
08.Cost:Depends on whether product is sold in bulk or this firm actually treats the contaminated waterfront
09.Throughput:the manufacturer has 15,000 lbs in his warehouse and can produce 12,000 lbs+ per week
10.fieldtested:yes
11.Fieldtestingdesc:Has been observed by Maryland DEQ, West Virginia DNR, and for a 4,000 metric ton oils spill in Abu Dhabi. EPA states 'in independent tests by NETAC, oil pollutants treated with the agent were reduced by up to 98% within 8 weeks.'
button:Send

This information is for tracking purposes only.
Submitting script: /cgi-bin/mail.cgi
Submitting host: wsip-98-172-57-199.no.no.cox.net (98.172.57.199)
Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729; Media Center PC 6.0; HPNTDF)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(133111654) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/14/2010 11:16 AM

01.Name:Richard Evons
02.Organization:DiaSource, Inc.
03.Email:purede@msn.com
04.Phone:(208) 384-5063
05.Type:technology, process, system
06.Briefdesc:Application of our specialized absorbent.
To be applied onto the oil slick and landfall sites. Will absorb and alter the condition of the captured oil. Causing sinking of oil to sea floor. On beaches and land changing its consistency into a managable form. Its super absorbancy is the key technology. This D.E. is a "least toxic" product, meeting OMRI certification and FDA Food Codex Standards.
07.Perfcriteria:THIS TECHNOLOGY HAS BEEN FIELD TESTED USING DIATOMACEOUS EARTH WITH LESS SURFACE AREA THAN OUR DIASOURCE D.E. Data available, e.g. Surface Area, Oil Absorption, lack of toxins. Current uses, etc.
08.Cost:Guesstimate, for cost of material (D.E.) at this time, not knowing viscosity of oil at time of application
At $675.00 per acre
On land/marshes/beaches at $1,400.00 per acre.
Application equipment and Labor at cost plus .08%
On Oil Slick @
09.Throughput:Site application of the D.E. material to be contracted for, with experts in air-deployment and/or ocen vessel dispersal capabilities, for the material (both dry and slurry form).
For land dispersal, aerial dispersal or land application, sensitive to eco structure involved.
10.fieldtested:yes
11.Fieldtestingdesc:Field tested using a diatomaceous earth with less surface area than our DiaSource D.E. On and in Southhampton water, UK, Halifax, Nova Scotia and off Kuwait. Was successful with no harm to the environment, either plant or fish life. Application on shoreline also proved successful. All by our consultant, Derek Davis and his team.
button:Send

This information is for tracking purposes only.
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Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0; GTB6;

(131200621) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/12/2010 08:06 PM

01.Name:James Botkos
02.Organization:Bioviva SA
03.Email:jamesbotkos@bioviva.ch
04.Phone:+36.30.950.51.55
05.Type:technology, process
06.Briefdesc:100% natural cleanup process of the shoreline
07.Perfcriteria:we have the technology and experience to deal with an oil spill that reaches the shoreline. Treatments that apply chemicals, bury or incinerate are not solutions; just delays. They replace one form of pollution with another !
A true solution is one that is environmentally friendly, healthy and natural!

08.Cost:We are ready to estimate the cost
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:See a case study:
http://www.oilspillemergency.com/documents/SoilTreatment-Hydrocarbons-EN-2.pdf

button:Send

This information is for tracking purposes only.
Submitting script: /cgi-bin/mail.cgi
Submitting host: gprs5e1bc5da.pool.t-umts.hu (94.27.197.218)
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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(128232344) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/09/2010 11:23 PM

01.Name:Peter Dattoli
02.Organization:Proteus Dynamics International
03.Email:pdattoli@proteusint.com
04.Phone:832-723-6444
05.Type:technology, process, system
06.Briefdesc:PROTEUS DYNAMICS INTERNATIONALâ„¢
Enhanced Bio-Remediation

Proteus Dynamics Internationalâ„¢ is an innovative leader in the manufacturing of products for bio-remediation of hydrocarbons, odor control and cleaning applications.

We exist to provide innovative solutions for hydrocarbon waste, odor control and cleaning â€“ where it happens â€“ quickly and efficiently, on soil and in water.

PROTEUS â€“ UNIQUE TECHNICAL APPROACH
We believe there are significant environmental and economic benefits to be gained by on-site remediation of soil contaminations and spills in an environmentally friendly manner. Proteus products function as both a solvent and surfactant â€“ a concentration of a synergistic blend of biodegradable, non-poisonous, non-flammable surfactants and selected nutrients that degrade hydrocarbons naturally using indigenous microbes. Because the Proteus products are readily biodegradable and nutrient enriched they enhance the biodegradation process rapidly and in an environmentally friendly manner with significant economic and environmental benefits.

Our products have been used successfully through the United States and around the world for bio-remediation and elimination of hydrocarbon waste, tank cleaning, odor control and in-situ remediation.

Among the five products developed Proteus is now manufacturing and distributing Proteus 168 TPH Eliminatorâ„¢, formally known as Texas Enviro Chem HE-1000. Proteus products have been successfully used in Chemical and Refining Plants, Oil field sites and Environmentally sensitive sites on contaminants ranging from Gasoline, Diesel, Oil, Sludge and many other complex compounds.
Environmentally Safe
1. 100% safe for the environment and the most sensitive eco systems.
2. EPA tested in accordance with 8260B and 8270C.
3. PH levels / LC 50 Aquatic Toxicity tests are in accordance with cleaning animals, people and plant life.
4. Proteus goal and approach is to save the wildlife and gently care for the marine eco systems, while completely destroying the pollutants or at a minimum to transform them into an innocuous substance.

Approved
1. Only product available that will, clean, remediate and support the long-term environmental cleansing process.
2. Listed on the EPAâ€™s National Contingency Plan for Oil Spill

Remediation.
3. Only EPA tested Surface Washing Agent that will remediate soil and pollutants in a short period of time, requiring fewer applications at a reduced cost long term.
4. Proteus168 THP Eliminatorâ„¢/ TX Chem HE-1000 can reduce contaminated media by as much as 95% within 24 hours.
5. Fire safety product, will put out most Hydrocarbon fires with no re-starting factors.

PROTEUS â€“ A BETTER APPROACH FOR BIO-REMEDIATION

Rapid On-Site Remediation
On site remediation of soils and media contaminated with petrochemical, and hydrocarbons is the most cost effective means of dealing with contamination.

Proteus has developed innovative on-site remediation technologies that help companies deal effectively with contaminated soils and/or spills. The Proteus process is capable of breaking down hydrocarbons in as little as 24 hours thereby eliminating the need for expensive excavation, relocation and disposal. Should removal still be necessary, the reduction of total petrochemical hydrocarbons to minimal amounts by the Proteus remediation process will greatly reduce the landfill disposal cost.

Transformative On-Site Remediation
The Proteus approach and goal is to completely destroy the pollutants if possible, or at minimum to transform them to an innocuous substance.

Conventional techniques used for remediation have been to dig up contaminated soil and remove it to a landfill, or to cap and contain the contaminated areas of a site - these methods have many drawbacks. The conventional techniques simply moves the contamination elsewhere and may create significant risks in the excavation, handling, and transport of hazardous material. It is very difficult and increasingly expensive to find new landfill, especially in the United States for the final disposal of the material. The cap-and-contain methods are only an interim solution since the contamination remains on site, requiring monitoring and maintenance of the isolation barriers long into the future, with all the associated costs and potential liability. With Proteus bioremediation products you effectively transform the contaminated area to its natural state of or at a minimum reduce the disposal cost.

Efficient On-Site Remediation
Proteus products were created to counter some of the limitations of conventional on-site remediation. Proteus products are a concentrated synergistic blend of synthetic biodegradable, non-toxic non-flammable surfactants and selected nutrients. Proteus products are capable of breaking down hydrocarbon mass into microscopic spheres upon contact. These droplets become tightly suspended in solution and remain stable in the rinse and treated media. These microscopic spheres become energy and a carbon source for the indigenous microbes. The selected nutrients in our Proteus products provide bio-stimulation to the indigenous microbes to growth in mass; therefore, increasing the rate of contaminant degradation. This process is fast, cost effective and in most cases enables the reuse of the treated soil while providing for adequate protection of human health and the environment.

The immediate evidence of mitigation is exhibited in sharp declines in Total Petroleum Hydrocarbons (TPH) levels in the treated areas. Results are achieved in the fraction of the time and expenses normally required for soil excavation, relocation, disposal, incineration, or traditional bioremediation

methods. The long-term benefit from using Proteus products is that they facilitate biodegradation by natural means.

CURRENT APPLICATIONS

Off Shore

Proteus 168 TPH Eliminatorâ„¢/TX Chem HE-1000 accelerates degradation of hydrocarbons rapidly and effectively in salt and fresh water and is approved for use on fowl, animals and sea-life. By accelerating the biodegradation of hydrocarbon molecules the environmental impact is greatly reduced on the waters surface and subsea environment. Proteus will support the current process in place and can be used in conjunction with dispersants to recycle as much oil as possible, then a heated pressure washer should be used to spray Proteus 168â„¢/HE-1000 onto the oil sheen to destroy hydrocarbons prior to reaching shore. Proteus 168â„¢/HE-1000 is the only Surface Washing Agent that can use salt water with the same expectations as fresh water while cleaning and remediating contaminated media. Not only is it highly efficient in clean up after reclamation and recycling efforts, but is exceedingly valuable in equipment clean up, such as boats, boons and other equipment in use.

On Shore

Proteus 168 TPH Eliminatorâ„¢/TX Chem HE-1000 is proven; EPA approved and tested answer for shoreline remediation. It can be sprayed from boats in advance with a heated pressure washer against the shoreline, grass flats and valuable gentle eco systems to protecting from possible damage. On land the solution can easily be applied with â€œportable hand sprayersâ€ and rakes during low tide on contaminated soil. The technical advantage of using this product is the natural remediation of existing soil and the nutrients provided will enhance plant life. These are an increasingly essential benefit in the natural preservation efforts. Economical benefits include; reduced cost due to application and on site cleaning/remediation, no need to purchase or pump new sand from offshore, no need for collection of contaminated soil for long hauling and disposal, which in turn will destroy the natural landscape.

APPLICABLE PRODUCT DESCRIPTIONS

Proteus 168 TPH Eliminatorâ„¢

Formally known as Texas Enviro Chem HE-1000â€¨

Proteus 168 TPH (Total Petroleum Hydrocarbons) Eliminatorâ„¢ has an extremely long working life and has proved its worth in the substantial acceleration of the microbial degradation of hydrocarbon waste. By using Proteus168â„¢/HE-1000 the hydrocarbon chain is broken down into small, minute particles that become a food source for the indigenous microbes. The Proteus168â„¢/HE-1000 can reduce the TPH levels in contaminated media by as much as 95% within 24-48 hours.â€¨â€¨

*This Proteus product is EPA safe for use around sensitive ecosystems.

â€¨â€¨Proteus 168 TPH Eliminatorâ„¢ is an in-situ bio-enhancement product that is created to counter some of the in limitations of conventional bio-remediation. When diluted on-site with water, Proteus 168 TPH Eliminatorâ„¢ is capable of breaking down hydrocarbon masses into microscopic spheres or droplets upon contact by spraying and mixing. These droplets become tightly suspended in solution and remain stable in the rinse and treated

media. These microscopic spheres or droplets become energy and carbon source for the indigenous microbes. The selected nutrients in Proteus 168 TPH Eliminatorâ„¢ provide bio-stimulation to the indigenous microbes to growth in mass; therefore, increase the rate of time for contaminant degradation.â€¨â€¨

In addition the Proteus 168 TPH Eliminatorâ„¢ oil droplets are engineered to have a sleight negative surface charge. This negative charge allows the oil droplets to repel each other, while sorbing onto the slightly positively charged aquifer soils. Since most aqueous colloidal systems are stabilized by electrostatic repulsion, the larger the repulsive forces between particles, the less likely they are to flocculate. The elector-negative charge of Proteus TPH Eliminatorâ„¢ will allow the emulsion to remain stable in suspension.
07.Perfcriteria:

Example Name/Contaminated Media/Treatment Process/Testing Method/Measured Prior (PPM)/Measured Final (PPM)/Estimated Time/How was it Completed or Contained/

1. Meinert Ranch-Hydrocarbon Contamination, Oil Stain and Odor-Complete Remediation and Clean Up-EPA 418.1-78,000-7,350-7 hours-6 (5 gal) buckets and 725 gal water to remediate 138 cubic yards- Insitu.
2.Jennings, LA-Hydrocarbon Contamination-1700 cubic yards Pit Closure-EPA 418.1-56,000-28,000-Immediately-Orig assessment was 1200 cubic yards- actual 1700 cubic yards- Work performed with est. 32 (55 gallon drums)-Added time due to limited HE-1000- achieved results in 48 hours - In-situ.
2a.Jennings, LA-Con't-Hydrocarbon Contamination-1700 cubic yards Pit Closure-EPA 418.1-56,000-3,920-24 hours later.
2b-Jennings. LA-Con't-Hydrocarbon Contamination-1700 cubic yards Pit Closure-EPA 418.1-Orig 56,000-56-48 hours later.
3.Corsicana, TX-Degas and Tank Cleaning-10,000 Gallon Tank-EPA 418.1-93% reduction-4 hours-1 gallon of HE-1000 10 Gallons of water.
4.Houston, TX-Heavy Equipment Cleaning-Various -Various-Perfectly clean, cut all grease and eliminated slick areas, removed wastewater odor.1000 bbls Crude Sludge Tank Cleaning- 80,000 Gallon BBL 78,000 5,300 48 Hours High Pressure Washer

Costal 1000 bbls Crude Sludge Degassed-80000 BBL Tank 3 hours

Costal 100 bbl flammable liquid Gasoline-sludge Tank Cleaning-60,000 gallon BBL reduce Flash Point 80 145 24 hours Increased flash point and remediated fuel for tank cleaning- 15 gallons of HE-1000

Costal Crude Bottom 100,000 bbl tank TPH and benzene reduction-remediation EPA 418.1 97 % TPH Reduction 93 % Benzene Reduction 48 Hours In-situ remediation

Ecuador Amazon Hydrocarbon Contamination 300 cubic meters Degraded Asphaltic Crude EPA 418.1 56,000 16,940 30 min Major Hydrocarbon Clean up- In-situ

Equator Amazon Hydrocarbon Contamination 301 cubic meters Degraded Asphaltic Crude EPA 418.1 15,160 1 HR Major Hydrocarbon Clean up- In-situ

Equator Amazon Hydrocarbon Contamination 302 cubic meters Degraded Asphaltic Crude EPA 418.1 9,256 2 Hr Major Hydrocarbon Clean up- In-situ

Equator Amazon Hydrocarbon Contamination 303 cubic meters Degraded Asphaltic Crude EPA 418.1 6,210 4 HR Major Hydrocarbon Clean up- In-situ

Equator Amazon Hydrocarbon Contamination 304 cubic meters Degraded Asphaltic Crude EPA 418.1 2,500 6 HR Major Hydrocarbon Clean up- In-situ

Equator Amazon Hydrocarbon Contamination 305 cubic meters Degraded Asphaltic Crude EPA 418.1
0 1 Year Later No evidence of TPH and now is a corn crop In-situ
San Patrico County Tidal Dispersment Pit 80 yards Pit clean up TPH Contamination EPA 418.1
71,000-140,000 11,510 24 hours In-situ remediation
Kennedy Ranch Oil Field production Pit 358 Cubic Yards- Remediation and Pit Closure EPA 418.1 83,000.00
18,000.00 20 Hours 16 Drums of HE-1000- Cold Weather
New Mexico Crude oil Remediation Pit and Hydrocarbon Clean up EPA 418.1 42,345.00 8,500.00
24 Hours 16 Drums of HE-1000- Cold Weather
New Mexico Con't Crude oil Remediation Pit and Hydrocarbon Clean up EPA 418.1 1,200.00
7 Days Cold Weather clean up - 14' F
New Mexico Con't Crude oil Remediation Pit and Hydrocarbon Clean up EPA 418.1
In-situ remediation
Ecolimpio Saltillo, MX Hydro Carbon Remediation Hydrocarbon Plant Clean Up EPA 418.1 50,000.00
1,300.00 24 Hours 40 Gallons HE-1000- Insitu
Ecolimpio Saltillo, MX Con't Hydro Carbon Remediation
Hydrocarbon Plant Clean Up EPA 418.1
400.00 96 Hours 41 Gallons HE-1000- Insitu

Additional Case studies and Testing available upon request

08.Cost:
09.Throughput:

11.Fieldtestingdesc:TESTING RESULTS
Proteus / Tex Chem HE-1000 has been tested according TNRCC TX 1005 (TPH), EPA 8260B (VOLITILE ORGANICS), and EPA 8270 C (SEMI-VOLATILE ORGANICS) as a remediation agent for the removal of hydrocarbons from contaminated soils. By using a known analytical standard (n-Decane) quantitatively analyzed by GLC (Gas Liquid Chromatography), Proteus ability to biodegrade hydrocarbons as follow:

â€¢ The treated soil sample showed the absence of volatile organic contaminants from Benzene to MIBK
â€¢ The treated soil samples showed the absent of semi-volatile organics from Acenaphthylent to 3, 3â€™ Dichlorobenzidine
â€¢ The treated soil samples were free of the C6-C12 hydrocarbon fraction. Hydrocarbon fraction C12-C35 was detected to be present at 162 ppm. THIS RESULTED IN A 98.35 % CLEAN-UP EFFICIENCY.
â€¢ The fact that hydrocarbon fraction C12-C35 was detected demonstrated that the cleaning formulation does not mask or interfere with the contaminants involved in the soil cleanup.
â€¢ Safe for the eco system and wildlife, transforms pollutants into innocuous substances
â€¢ Meets the LC 50 Aquatic Toxicity test in accordance with cleaning animal and plant life
â€¢ PH Balanced â€“ 100% neutral
â€¢ Enhances stem growth in plants
â€¢ Non-disruptive to the natural landscape and aquatic life

button:Send

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Submitting script: /cgi-bin/mail.cgi
Submitting host: 68-241-110-113.pools.spcsdns.net (68.241.110.113)
Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; GTB6.4; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729; Media Center PC 6.0; MSSDMC2.5.2219.1)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(128144744) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/09/2010 02:47 PM

01.Name:Raymond Warren
02.Organization:Individual
03.Email:raymondwarren@comcast.net
04.Phone:662-678-6049
05.Type:process
06.Briefdesc:Eco Miracle is a 100% biodegradable clean up soluation for petroleum based spills for personal, equipment, plant and wildlife, shoreline, soil and will regenerate ecosystems
07.Perfcriteria: Water soluable soluation completely breaks down any and all petroleum based contaminants with no harmful effects to human, plant or wildlife and acts as soil and plant regenerative
08.Cost:cost to the a Federal Agency or Contractor would be less than market value. Per gallon in a storage container ready for use it can be mixed 1000 to 1 ratio. Cost would vary depending on strength mixture and degree of contamination. Currently the average consumer price is 140.00 per gallon
09.Throughput:Can not be used full strength. Must be activated by water. Sample is available as well as MSDS sheet
10.fieldtested:yes
11.Fieldtestingdesc:It is being used as both a cleaner/degreaser publically and professionally as agri-regenerative on pastureland with proven results. MSDS sheets are available. It's primarily function is a cleaner/degreaser but is human safe as a body wash that will breakdown and dissolve and remove all petroleum based products. But it has little effect on any synethenic petroleum product.
button:Send

This information is for tracking purposes only.
Submitting script: /cgi-bin/mail.cgi
Submitting host: c-75-66-250-254.hsd1.ms.comcast.net (75.66.250.254)
Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0; .NET CLR 2.0.50727; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(126221704) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison, Lara Autry, Eric Koglin

05/07/2010 10:17 PM

01.Name:Shannon Vaughan Stafford
02.Organization:Inventive Solutions, LLC
03.Email:paul@inventivesolutionsllc.com
04.Phone:225-588-8760
05.Type:technology, process
06.Briefdesc:We recommend the use of two of our chemical products for the complete emulsification and evaporation of the crude oil. Our environmentally safe chemicals, EP-H and EP-CO, can be used to treat and remove the crude oil within 48-72 hours following application. Our compounds can be combined with water to form a 10% solution and applied to pure crude. EP-H and EP-CO also work on refined oil and in fresh water environments, but require about 30% more product that pure crude or salt water environments.
07.Perfcriteria: Salt or Fresh Water Process for Eliminating/Evaporating Crude Oil

To begin, first attempt to corral the pure crude. (Can be utilized in non-corralled situations, but would likely require air equipment for spraying the affected site). Utilizing a wide angle, high pressure, high velocity spray, apply a 10% solution of EP-H first approximately five passes over the region and then follow it with five passes of EP-CO. The amount sprayed is based on thickness of oil, area size, and salinity level of ocean water. Higher salinity levels require less amount of products for successful cleanup, whereas lower salinity levels require higher than normal product usage. Water temperature does not affect chemical effectiveness.
After 5-10 minutes have elapsed since applying both chemicals, the following will be observed: Color changes of the pure crude from black to brown in addition to visible small bubbles. The small bubbles are an indicator that the emulsification process has begun. If you do not observe these two findings, then additional product needs to be applied to the area. Estimated completion time: Overall cleanup should be completed in about 48 hours.

Environmental Points of Differentiation
1. Both chemicals in solution should have a neutral pH
2. Aquatic or aviary life can be sprayed directly whether on shore or in the ocean without damaging the health of the animal. If sprayed directly into the eyes, it could sting, but will not have any damaging affects to the animalâ€™s vision. The chemicals will emulsify and evaporate the pure crude off of the feathers just as it would the ocean.
3. There is NO toxic out gassing exposure to first responders when the chemicals are applied to the pure crude as the evaporation process generated a neutral gas.
4. The process is designed to be simple and uncomplicated which increases the likelihood for consistent implementation. It does not require any skimmers, sponges or other devices which can leave mercaptons, phenols, or other detrimental compounds to sea life.
5. No harm to people who may get the chemicals onto their skin, which makes the process safe for first responders and residents that, may come into contact with the chemicals. Standard protocols for using powders are employed using a simple dust mask to prevent the concentrated power particles from being inhaled.
6. There is no residual left in the water after the pure crude is eliminated, and it will not disturb or alter the pH of the water.

7. The chemicals used are NOT classified as hazardous and there is no increased costs and risk levels for transportation and storage.

Shoreline â€“ Beach Sand â€“ Land â€“ Asphalt â€“ Cement/Pavement Application: The same spray solution is used for all of the above applications. Rocks along the shoreline will be completely clean without any leftover sticky residue. Beach sand can be removed of microbes in addition to cleaned of all pure crude and its residue. When applying to soil, especially around drilling sites, it is important to determine the depth of the affected area. After cleaning the top seven to eight inches of soil, the soil should be turned so that the chemicals can penetrate deeper into the soil if needed.

08.Cost:our product cost is relevant to the thickness of the oil slick.
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:as a result of field testing, the products applied yielded total breakdown and erradication of crude oil. the products, though chlorinated compounds, do not leave any residual chlorine behind following application. No harm to the environment or any aquatic life.
button:Send

This information is for tracking purposes only.
Submitting script: /cgi-bin/mail.cgi
Submitting host: vpn.angelleconcrete.com (12.7.148.210)
Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0; .NET CLR 1.1.4322; InfoPath.2; .NET CLR 2.0.50727; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(126131308) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison, Lara Autry, Eric Koglin

05/07/2010 01:13 PM

01.Name:Stephen LaRoche
02.Organization:Westford Chemical Corporation - BioSolve
03.Email:slaroche@biosolve.com
04.Phone:508-878-5895
05.Type:technology
06.Briefdesc:BioSolve Hydrocarbon Mitigation Technology is well suited for the type of petroleum involved in this spill. BioSolve has been UL listed for Vapor suppression and fire mitigation of class B liquids and is an NCP listed Surface Washing Agent that is utilized for land based petroleum remediation.
07.Perfcriteria:Please contact us via telephone to discuss technical details of various applications.
08.Cost:dependant upon application type- i.e. shoreline cleanup, vapor suppression, equipment decontamination, vapor suppression/ dispersant applications, etc.
09.Throughput:20,000 gallons of concentrate per day.
10.fieldtested:yes
11.Fieldtestingdesc:Extensive testing & use and results worldwide.
button:Send

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Submitting script: /cgi-bin/mail.cgi
Submitting host: c-24-147-18-33.hsd1.ma.comcast.net (24.147.18.33)
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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
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(126120854) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t o : Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin

05/07/2010 12:08 PM

01.Name:John McIlwaine
02.Organization:BlueGold
03.Email:john@bgwater.com
04.Phone:1-800-551-4340 ext 204
05.Type:technology, process
06.Briefdesc:Our product is a completely natural, chemical-free, nano technology that is used to remove contaminants from water. When sprinkled on the oil, it attaches it to the oil particles and within 48 hours, the oil is completely consumed leaving behind a completely organic material that sinks and can be eaten by fish and wildlife. One barrel of our powder will process 5 barrels of oil.
07.Perfcriteria:Within about 48 hours of application, our product wil completely consume the oil particles leaving behind a completely organic by-product. It can also be applied to oil that has reached the shore and will achieve the same results, making clean-up virtually effortless.
08.Cost:Volume pricing
09.Throughput:We can scale production to whatever levels are necessary.
10.fieldtested:yes
11.Fieldtestingdesc:Watch this video of our product processing crude oil in a beaker of water: http://www.youtube.com/watch?v=-il29jxdJv4
button:Send

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Submitting script: /cgi-bin/mail.cgi
Submitting host: c-71-59-13-19.hsd1.ga.comcast.net (71.59.13.19)
Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729; Media Center PC 6.0; .NET4.0C; .NET4.0E; InfoPath.3)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
Mail to File: bpspilltech.txt

(125113558) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison, Lara Autry, Eric Koglin

05/06/2010 11:36 AM

01.Name:Jerome Hebert
02.Organization:Mark Tool & Rubber Co, Inc.
03.Email:jerome@marktool.com
04.Phone:337-828-4479
05.Type:technology, process, system
06.Briefdesc:Bioremediation surfactant
07.Perfcriteria:BIOVERSAL HC is a very ecoefficient cleaning product for oil problems in the environment and at the same time for directly averting danger and eliminating oil disasters on large waterways, coasts and shores.
BIOVERSAL HC encapsulates oil particles and prevents them from sticking to and landing on shorelines, beaches, rocks, plants and animals. BIOVERSAL HC can be used to clean easier walls of locks and other water structures. BIOVERSAL HC is pH-neutral and dermatologically safe.
When used on waterways, the BIOVERSAL HC - oil - water mixture remains on the surface. The bioactivator contained in BIOVERSAL HC ensures high accelerated biological degradation of the remaining oil residue and leaves H2O and CO2 as a result. This substantially reduces the potential danger from the oil.
In those cases where conventional oil combating agents are not applicable on waterways or do not show any satisfactory effect, BIOVERSAL HC when used correctly can be harmless to the environment.
BIOVERSAL HC is highly biologically degradable and helps animals and plants to regain their natural environmental conditions.

08.Cost:Pennies per gallon because the Dilution ratio is only 2%
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:BioVersal HC has been field tested in Europe and other countries around the world for oil spills
button:Send

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Submitting script: /cgi-bin/mail.cgi
Submitting host: wsip-174-79-17-162.lf.br.cox.net (174.79.17.162)
Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0; GTB6.4; .NET CLR 1.1.4322; .NET CLR 2.0.50727; .NET CLR 3.0.04506.30; .NET CLR 3.0.04506.648; InfoPath.1; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc

(125160703) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison, Lara Autry, Eric Koglin

05/06/2010 04:07 PM

01.Name:Linda Brown
02.Organization:MH Stallman/Cellect
03.Email:linda@mhsco.com
04.Phone:610-389-0011
05.Type:technology
06.Briefdesc:An open cell, crosslinked polyolefin foam that will absorb more than 33 times its weight in oils. May be a good product to use near the shorelines or sensitive areas. Please call me to discuss further. It's a great product and should be looked at. It won't hurt to look at a sample & test yourself.
07.Perfcriteria:A highly effective oleophilic/hydrophobic foam with a high affinity for oils and the ability to repel water.
08.Cost:TBD. It is manufactured in large buns, 3"x48"x72". The skin most likely will need to be removed if you decide to use all 3" or it will also add cost to cut into desired sheets.
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:This material has been utilized for oil containment in booms and spa/pool applications to remove oil from water surface.
button:Send

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Submitting script: /cgi-bin/mail.cgi
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Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
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(124142738) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison 05/05/2010 02:27 PM

01.Name:Robert Tilley
02.Organization:SafeTek USA
03.Email:rftilley@safetekusa.com
04.Phone:904-318-2403
05.Type:technology, process, system
06.Briefdesc:Microbial Product
07.Perfcriteria:Ultra-Microbes(tm), a biological/microbe product, has been approved by the EPA and added to the list of approved products for water applications involving oil spills. Having been tested extensively by an Italian university and found to be harmless to plant and animal life and safe for the environment, the Ultra-Microbes(tm) are added to containers of sea water and mixed. This mixture is then be sprayed onto the ocean surface to immediately start remediating the oil. The microbes quickly digest the oil as a food source and break it down into carbon, CO2 and a white protein that is basically fish and plant food. The oil becomes non-hazardous, and when all oil is digested the microbes die.

SafeTek USA Announces EPA Approved BP Oil Spill Solution that Literally Eats Oil

Ultra-Microbes(tm) can be used in the following ways
a. Sprayed directly on the open water slick. These microbes are designed to eliminate oil slicks and go to work immediately digesting the oil into harmless and environmentally friendly carbon, CO2, and protein.
b. Sprayed directly onto the beach, rocks, vegetation, shoreline, jetties, etc, Ultra-Microbes(tm) starts digesting the oil, rendering it harmless to both plant and animal life.
c. Used in the water while caring for oil contaminated animals, Ultra-Microbes(tm) digests any remaining oil after cleaning and then dies leaving the animal with a â€œdustâ€ of protein that will easily fall off in a few days.

The key in is to simply get the microbes to cover as much area as possible and allow the microbes to spread out and colonize and attack the oil. 5 billion microbes (per gram) reproduce quickly while eating the oil and become 5 trillion within hours. Each microbe is digesting and remediating the oil sheen as it thrives.

SafeTek USA currently has 5 tons available with a manufacturing capacity of 12-15 tons per week. Please contact SafeTek USA at 1-877-620-SAFE for more information.

08.Cost:$19,000 per 1sq mile of open water or 4 acres of land
09.Throughput:12-15 tons per week of production availability.
10.fieldtested:yes
11.Fieldtestingdesc:(Oppenheimer Formula)
button:Send

(124144443) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t Jeffrey Levy, Minerva Rojo, Adrea
o Mehl, Reggie Washington, Kay
: Morrison

05/05/2010 02:44 PM

01.Name:kevin Wang
02.Organization:PowerPlus Cleaning Solutions
03.Email:kevin@powerplusonline.com
04.Phone:714-635-9264
05.Type:technology, process, system
06.Briefdesc:We built the machines used for the Exxon Valdez cleanup and need this info routed to whoever is in charge ASAP. These clean anything from Boats and rocks to 20 tools spraying warn soapy cleaner to decontaminate animals as well as suck up the oily water for proper disposal.
07.Perfcriteria:Please watch the video of this machines sister one called the Prodigy Hsr at www.powerplusonline.com
Forward this to who ever might be responsible for cleanup of the shores/boats act. From this spill. We have a trained chemist as well as Engineer who has consulted on every major US. Disaster in the last 22 years. We can help but you need to route this properly by forwarding it to the correct persons.

08.Cost:call for cost, These clean anything from Boats and rocks to 20 tools spraying warn soapy cleaner to decontaminate animals as well as suck up the oily water for proper disposal.
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:video of testing available at www.powerplusonline.com
button:Send

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Referred: http://www.epa.gov/bpspill/techsolution.html
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Mail to File: bpspilltech.txt

(124201846) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t o : Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison

05/05/2010 08:18 PM

01.Name:Heath Perry
02.Organization:inventor
03.Email:hperry@sealandrecreation.com
04.Phone:941-716-0607
05.Type:technology, process, system
06.Briefdesc: My colleague and I have developed a process that absorbs crude oil in water. It can be applied in open water, near coastal and along shore lines. It can also be used to treat wildlife. It is biodegradable, green and can be reused. It also allows the oil captured to be collected and recycled. It is proven and the results are immediate. The reason it is not on the market or in the media is we have not patented the process yet. We want to get involved to help clean up and avoid a colosal evvironmental disaster. I have tried to contact the Governor, Lt. Governor etc. but can't get any where can you help us help the disaster?
07.Perfcriteria:The process can capture almost 99.9% of the oil on AND below the surface of the water . Once collected the oil is separated from our absorbant mixture. The oil and our absorbant then can be recycled and re-used.
08.Cost: 5 million dollars per ton (can be recycled and reused) 1 ton treats 23,391 gallons of light sweet crude.
09.Throughput:The funding dictates the amount of absorbant material produced. Production can begin immediately.
10.fieldtested:yes
11.Fieldtestingdesc:This process has been tested over the past 13 years under various conditions scale applications.
button:Send

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Submitting host: 186.sub-75-200-197.myvzw.com (75.200.197.186)
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Referred: http://www.epa.gov/bpspill/techsolution.html
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Mail to File: bpspilltech.txt

(123110216) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison — 05/04/2010 11:03 AM

01.Name:Chad Trivett
02.Organization:Golden Environmental Products Inc.
03.Email:chad@goldenenviro.ca
04.Phone:705-313-3830, 877-642-7632
05.Type:technology, process
06.Briefdesc:Eco Certified/Friendly Bio Based cleaner and degreaser. Contains active hydrocarbon degrading/digesting microbes. Contained in an environmentally friendly surfactant.
07.Perfcriteria:Works on all hydrocarbons, breaking them down into water, carbon dioxide and oxygen.
08.Cost:Volumes and treatment varies on contaminant concentration.
09.Throughput:Sprayers, Fire engine hose, plane drop ect.
10.fieldtested:yes
11.Fieldtestingdesc:The product has been used extensively in emergency response applications for oil spills. It is approved by the Ministry of the Environment in Canada and has been very effective on shorelines, soils, grass, plant life and multiple hard surfaces.
It has been used for over 10 years.
button:Send

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Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0; FunWebProducts; .NET CLR 1.1.4322; .NET CLR 2.0.50727; OfficeLiveConnector.1.4; OfficeLivePatch.1.3; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
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idaemon.rtpnc.epa.gov

(123152522) Oil Spill Technology Solution

t o : Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison

05/04/2010 03:25 PM

01.Name:Mark Culbreth
02.Organization:Environmental consulting & Technology, Inc.
03.Email:mculbreth@ectinc.com
04.Phone:813) 991-6390
05.Type:technology, process
06.Briefdesc:ECT and its project team recognize the need to protect valuable environmental and economic resources. Prioritization of response actions and resources is a vital role in managing this potential crisis. ECT proposes to work with the Department to identify potential risks, prioritize response actions, and implement response actions.

It is recognized that there are three broad areas where response actions can take place. These include offshore, near shore, and onshore. Response actions in each of these areas are summarized below:

Offshore
Offshore response actions include capturing and recovering free product, burning free product and adding dispersants to free product to break up the oil. Until the well is plugged or the oil is otherwise stopped from flowing into the Gulf, containment and recovery actions are likely the most applicable response actions.

After the flow of oil has stopped additional actions including expanded containment and recovery actions may be more feasible. Dispersants have been used to break up the oil, but could pose potential toxicological threats by increasing the bioavailability of the hydrocarbons.

Offshore response actions are beyond the scope of services ECT proposes to provide to the Department. However, ongoing monitoring of the oil slick and its migration is critical to the protection of Floridaâ€™s coastline. ECT has oceanographers that can monitor the conditions responsible for the migration of the oil slick and help predict the direction of migration and landfall locations.

Near Shore
Near shore receptors include oyster grounds and spawning areas for numerous marine species. Protection of these areas is subject to the prevailing winds and local currents and tides. If these areas can be identified and protection zones established, resources can be focused in an attempt to protect these economically important areas.

While the use of conventional dispersants is costly and could pose subsequent toxicological threats, the use of a dispersant coupled with an oxidizer designed to destroy the hydrocarbons would provide the added benefit of both breaking up the oil slick and destroying the hydrocarbons, something that has not been done previously. ECT has identified a supplier of a product that consists of dispersants encapsulating hydrogen peroxide. The dispersants are primarily citrus oils derived from citrus products in Florida. The product VeruSOLVE-Marine, is well suited to break up and destroy the oil slick. One of the by-product of the degradation of the hydrogen peroxide is increased dissolved oxygen. This will act as a stimulant for microbes in the environment.

ECT proposes to follow the VeruSOLVE application with an application of a microbial solution, Micro-Bac M1000-H to enhance the destruction of the residual hydrocarbons. Destruction of the residual hydrocarbons is important to minimize potential toxicological effects to marine life. These products can be applied to the environment via aircraft or boats. It is envisioned, depending on the targeted areas, to team with the Department of Forestry or the U.S. Forest Service to utilize their aircraft to apply these products via airborne platforms where applicable.

These products can also be applied by boat depending on the location. These actions will require the strategic placement of booms to contain and/or control oil migration and can provide a significant degree of protection to the near shore areas. Accumulation of oil in strategic locations will allow for the most economical application of remediation products and the greatest amount of destruction of the oil per gallon of remediation product.

It is likely that repeated treatment in these areas will be required as oil continues to migrate into these protection zones. This cannot be predicted due to changes in the migration pattern of the oil slick as winds and currents vary. Monitoring of these areas will be an important part of the project.

In addition, it may be worthwhile to collect samples of shellfish and other species to establish a baseline against which future sampling can be compared to monitor the effects of the oil on target species. During the course of the recovery effort, periodic samples should be collected and analyzed to test for residual effects from the oil and to identify when it is safe to resume harvesting.

Onshore
Miles of beaches, estuaries, oyster grounds, and nursery grounds for numerous marine fisheries may be impacted by the oil landfall. While some of these locations are readily accessible by land, others, such as estuaries, bays, and inlets, are difficult to access. ECT proposes to use the procedures identified above for protection of these areas and treatment to break up and destroy the residual oils.

In areas where there are narrow inlets and increased flow of water and possibly oil, it may be possible to use booms to direct oil into treatment zones during incoming tides. In essence, we would create a funnel using booms, to route the water into the inlet or pass and capture the water to the extent practical. Where it can not be captured, we would use the treatment technology and apply the remediation products from a boat into the treatment zone and allow the products to break up and destroy the hydrocarbons.

For beaches and structures such as seawalls, piers, jetties and other breakwaters; these surfaces can be pre-coated with the VeruSOLVE-Marine product when landfall of the oil is certain. The pretreatment will serve to minimize the impregnation of oil into these surfaces. Following landfall, a second application of the VeruSOLVE-Marine followed by an application of the M1000-H microbe solution will breakdown the oil and provide destruction of the residual hydrocarbons. This approach will minimize the damage to the beaches and allow for the resumption of recreational use of the beaches.

Treatment, both pre-treatment and post-treatment can be conducted using boats equipped with tanks and sprayers to treat the surfaces and by vehicles equipped with tanks and spray nozzles to treat the beaches. Monitoring of these surfaces after landfall and post-treatment will be required. It is possible that retreatment may be necessary and the need for such will be determined by monitoring.

This letter is being transmitted via email for rapid delivery to you. Also included in the email are MSDS sheets for the products described above, and also links to two videos that illustrate the applicability of these products. It should be further noted that the M1000-H solution has been preapproved for use in remediation of petroleum contamination. A related product to the VeruSOLVE-Marine product, has been approved for use in the state for remediation.

At this time, we cannot provide specific costs for cleanup due to many variables that have yet to be quantified. We can estimate that the cost for VeruSOLVE-Marine is approximately $3.00 per gallon and the cost for the microbial solution, M1000-H is approximately $23.00 per gallon. These costs do not include shipping, labor, or delivery platforms.

07.Perfcriteria:Free product dispersed and destroyed by oxidation and bioremediation
08.Cost:$26/gallon plus shipping, labor, and delivery platform
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:Microbac M1000-H has been usded to remediate an oil spill in Ecuador
button:Send

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Submitting script: /cgi-bin/mail.cgi
Submitting host: rrcs-24-73-207-130.se.biz.rr.com (24.73.207.130)
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(122083753) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t o : Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison

05/03/2010 08:37 AM

01.Name:Dave Eikelberg
02.Organization:EMI
03.Email:davideikelberg@cfl.rr.com
04.Phone:321-277-7537
05.Type:technology, process, system
06.Briefdesc:My associate with Environmental Management, Inc., has the technology, experience, and ability to mobilize quickly, for cleanup of the shoreline oil.
07.Perfcriteria:The soil is in-situ treated, cleaned, and returned in place. All that remains is a contract to begin mobilization.
08.Cost:Unknown
09.Throughput:NOTE: EMI is already certified by the State of Florida and the technology has been used throughouty the U.S.
10.fieldtested:yes
11.Fieldtestingdesc:NOTE: EMI is already certified by the State of Florida and the technology has already been proven as viable and effective. Call ASAP 321-277-7537 or 865-574-0570.
button:Send

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Browser: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0; .NET CLR 1.1.4322; .NET CLR 2.0.50727; .NET CLR 3.0.04506.30; MDDR; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729; InfoPath.2)
Referred: http://www.epa.gov/bpspill/techsolution.html
TSSMS: emergenc
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(122101700) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t o : Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison

05/03/2010 10:17 AM

01.Name:Dr. Banwari Lal
02.Organization:THE ENERGY AND RESOURCES INSTITUTE (TERI), Darbari Seth Block, Habitat Place, Lodhi Road, New Delhi â€“ 110 003, India.
03.Email:banwaril@teri.res.in
04.Phone: +91 â€“ 11 â€“ 2468 2100, 2468 2111 , (M)9811392250
05.Type:technology, process
06.Briefdesc:Our technology is a clean up process by using bioremediation technology. We use indigenous, customized and site specific bacterial species along with specific nutrient recipe which could degrade and mineralize crude oil. The end product of the bioremediation process is CO2, water and microbial biomass, hence the process is environmental friendly. Our process is specifically for clean up of oil spill in sandy sea shore and not for rocky sea shore.
In this process a secured bioremediation site fitted with impermeable HDPE (High density polyethylene) liner would be developed near the contaminated sea shore. The oil contaminated sand would be lifted from the sea shore and transported to the nearby secured bioremediation site where it will be treated by our patented bioremediation process (Patent No.: 168/DL/2000).

07.Perfcriteria:The performance of the process would be monitored by analyzing the oil contaminated sand samples, for the following parameters, collected from the bioremediation site during the process. The monitoring would be done once in a week. The parameters to be analyzed are:
a. Total petroleum hydrocarbon (TPH) content (method no. USEPA 1664 / 8260)
b. BTEX (Benzene, Toluene, Ethyl benzene and Xylene) content, (method no. USEPA 8260)
c. PAH (Polycyclic aromatic hydrocarbon) content etc. (method no. EPA 610 / SW - 846 â€“ 8100 / USEPA 8100 / 8270)
d. Microbial population (standard microbial method)
In a successful process, the microbial population will increase and the TPH, BTEX, PAH content will decrease during the process.

08.Cost:The cost of complete treatment would be US$ 80 per cubic meter of oil contaminated sand.
09.Throughput:The initial TPH content upto 10% can be completely biodegraded in 2 â€“ 3 months time period by using bioremediation technology..
10.fieldtested:yes
11.Fieldtestingdesc:Our bioremediation process has been successfully field tested in various parts of India with different climatic conditions and different types of oil contamination. In India we have bioremediated more than 2,00,000 metric Tonnes of oil soaked / oil contaminated soil and the treatment of around 60,000 Tonnes of oil soaked / oil contaminated soil are in progress by using our bioremediation process. Most of the Government companies in India, like Oil and Natural Gas Corporation ltd. (ONGC), Indian Oil Corporation Ltd. (IOCL), Bharat Petroleum Corporation Ltd. (BPCL), Hindustan Petroleum Corporation Ltd. (HPCL), Oil India Ltd. (OIL), etc. have been using our bioremediation process since last 10 years for cleaning up of oil spill. Our bioremediation process has yielded more than 11 national and international awards and more than 20 publications in peer reviewed international journals. Some of the publications are as given below:
â€¢ S Krishnan, P M Sarma and Lal B. 2006. Comparative analysis of

phenotypic and genotypic characteristics of two desulphurizing bacterial strains, Mycobacterium phlei SM120-1 and Mycobacterium phlei GTIS10. Letters in Applied Microbiology. 42 : 483-489

â€¢ Prasad G S, Mayilraj S, Sood N, Singh V, Biswas K, and Lal B. 2005. Candida digboiensis sp.nov. a novel anamorphic yeast species from an acidic tar sludge-contaminated oil field. International Journal of Systematic and Evolutionary Microbiology 55: 633â€“638.

â€¢ Mishra S, Sarma P M, and Lal B. 2004. Crude oil degradation efficiency of a recombinant lux tagged Acinetobacter baumannii strain and its survival in crude oil contaminated soil microcosm. FEMS Microbiology Letters. 235: 323-331.

â€¢ Sarma P M, Bhattacharya D, Krishnan S, and Lal B. 2004. Assessment of intraspecies diversity among strains of Acinetobacter baumannii isolated from sites contaminated with petroleum hydrocarbons. Canadian journal of Microbiology. 50: 405-414.

â€¢ Sarma P M, Bhattacharya D, Krishnan S, and Lal B. 2004. Degradation of polycyclic aromatic hydrocarbon by a newly discovered enteric bacterium, Leclercia adecarboxylata. Applied and Environmental Microbiology. 70: 3163-3166.

â€¢ Bhattacharya D, Sarma P M, Krishnan S, Mishra S, and Lal B. 2003. Evaluation of the Genetic Diversity among the Strains of Pseudomonas citronellolis isolated from oily Sludge Contaminated Sites. Applied and Environmental Microbiology. 60: 1435-1441.

â€¢ Mishra S., Jyot J., Kuhad, R., and Lal B., 2001. Evaluation of inoculum addition to stimulate in situ bioremediation of oily sludge contaminated soil, Applied and Environmental Microbiology, 67:1675-1682.

â€¢ Mishra S., Jyot J., Kuhad, R., and Lal B., 2001. In situ bioremediation potential of an oily sludge degrading bacterial consortium. Current Microbiology 43: 328-335

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TSSMS: emergenc
Mail to File: bpspilltech.txt

(132155833) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/13/2010 03:58 PM

01.Name:Allen Peterson
02.Organization:Indoff Inc
03.Email:allen.peterson@indoff.com
04.Phone:850-433-9610
05.Type:process
06.Briefdesc:oil eating microbes, x-tex oil absorbent fabric, inflatable booms & absorbant booms
07.Perfcriteria:oil eating microbes can dispursed on open water or on beach or wetlands to remediate oil with no negative impacts to the environment. X-tex oil absorbing fabric has many applications such as silt fences, absorbing boom systems & lining of coastline to prevent oil from reaching shore.
08.Cost:1 ton of microbes can effectively treat 1 square mile of open water or 4 square acres of land. Cost of microbes is determined by volume needed.
09.Throughput:We have production capability on all products. x-tex can be produced at 300,000 l/f per week. Boom varies on the type. Microbes are currently being cultivated for use.
10.fieldtested:yes
11.Fieldtestingdesc:The use of microbes was used on the 1989 Megaborg spill in Texas & proven effective. Visit my website www.IndoffDestin.com to video of microbes in action & how x-tex compares to other oil absorbing products. You will be impressed!
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(125095047) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov

t o : Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison

05/06/2010 09:50 AM

01.Name:George E. Hoag, Ph.D
02.Organization:VeruTEK TEchnologies, Inc.
03.Email:ghoag@verutek.com
04.Phone:
05.Type:technology
06.Briefdesc:1) plant oil based dispersant and 2) plant oil based dispersant with peroxide based oxidation (S-ISCO) process
07.Perfcriteria:1) dispersent used as other dispersants
2) S-ISCO process used to treat impacted beaches, wetlands and structures. Can be used prophylatcially to minimize entrapment of oil beaches and material surfaces. Stimulates plant growth. Very effective.
08.Cost:1) Dispersant Costs are $4 to $6/gal FOB dependant on strength 2) S-ISCO costs $5 to $6/gal FOB dependant on strength. Beach treatment cost per application is $0.01 to $0.25/ft2 per application and number of applications depend on nature of treatment needed (i.e., one time versus on going for continued treatment) and the mass of oil on beach and wetlands.
09.Throughput:
10.fieldtested:yes
11.Fieldtestingdesc:S-ISCO has been extensive field tested or remediation. Technology innovation office is very familar with this technology. Please see website link descript use for oil spill clean up:
http://www.verutek.com/oil-spill-treatment.aspxf
button:Send

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(121105728) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl 05/02/2010 10:57 AM

01.Name:Robert A. Threlfall
02.Organization:B & C Group International
03.Email:rt@secure-systems.org
04.Phone:608-318-2213
05.Type:technology
06.Briefdesc:Aqua N-cap is a non toxic, non hazardous super absorbant polymer that can be used on spilled crude oil on water or solid surfaces. See www.tepcoproducts.com
07.Perfcriteria:EPA NCP listed and can be used for spill response in the waters of California.

Absorbs ten times its weight.
08.Cost:Stated to be extremely cost effective. Applied at rate of .5 to 2 pounds per gallon of spilled hydrocarbon. Available in 650 lb. heavy duty containers.
09.Throughput:Unknown.

10.fieldtested:yes
11.Fieldtestingdesc:Diesel spill on pond site and diesel spill on roadway.

My reason for submitting this technology is I believe this polymer could be used on shore lines and around critical nesting sites. Also, consideration should be given to applying Aqua N-cap on shorelines and wetlands before the oil reaches the site. Also, after application of this polymer the resultant mat can be folded up and easily removed.

Note, this technology was suggested by Annette Harpole very briefly on Lisa P. Jackson's Facebook page on May 2, 2010.

Note, I have no affiliation with Tecoproducts.
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Referred: http://www.epa.gov/bpspill/techsolution.html

(133033644) Oil Spill Technology Solution

idaemon.rtpnc.epa.gov to: Jeffrey Levy, Minerva Rojo, Adrea Mehl, Reggie Washington, Kay Morrison, Lara Autry, Eric Koglin, thekogs2

05/14/2010 03:36 AM

01.Name:Saulius Grigiskis
02.Organization:JSC "Biocentras"
03.Email:biocentras@biocentras.lt
04.Phone:+37052661313
05.Type:technology
06.Briefdesc:Research and production company JSC â€žBiocentrasâ€œ (www.biocentras.lt) has been cleaning up soil and water from oil contaminants by the bacterial preparations since 1988. The clean up technology is patented in USA (Nr. 5494580, 1996). The essence of the biodegradation process is CnHm + O2 + microorganisms = CO2 + H2O + Q. It is suitable for using both in sea water and shores, does not cause any risk of biological contamination to the environment and is not harmful to human and animal health. JSC â€œBiocentrasâ €□ biological enzyme preparation extinguishes the oil and its products without any consequences to the environment and leaves no remains of the oil because of its biological origin.
07.Perfcriteria:Ocean water surface
Due to the spreading of the crude oil on all Mexican Gulf territory, we offer to treat the polluted surface, especially migrating to the seashore, by the liquid microbial suspension. For more effective biodegradation process it is necessary to add salts, containing nitrogen and phosphorus, on the treated surface. For 1 km2 of contaminated surface it is necessary to use 20 â€“ 40 t of the bacterial preparation, which has to be revived, than diluted to the working suspension and sprayed.
Clean up processes are different for the ocean and for the seashore.

Clean up of the seashore
The process is similar to the purification of the contaminated seawater. Working proportions are: to clean up 1 m2 of soil it is necessary to prepare 1 l of working suspension prepared in the same way as for the ocean. 20 â€“ 40 ml of the starting material is diluted to 1 l of the working suspension where nitrogen and phosphorus salts are already diluted. The prepared mixture of microbes and salts is sprayed on the soil. If it is necessary, repeated treatment is carried out after the determination of the residual concentration of the oil hydrocarbons and nitrogen and phosphorus salts.
08.Cost:To clean up 1 km2 JSC â€œBiocentrasâ€□ has to manufacture 20 â€“ 40 t of the bacterial preparation. This lasts approximately 2 â€“ 3 months. After 2 weeks the contract agreement is signed, we could start to clean up about 50 acres of the contaminated territory. This time enables us to coordinate technical parameters, equipment (transport, manufacturing, acceptance, treatment conditions).
09.Throughput:Final clean up depends on the thickness of the oil film on the water surface or the concentration of oil contaminants in soil and lasts from 2 months up to 1 year.
10.fieldtested:yes
11.Fieldtestingdesc:Our developed technology was applied for the clean up of large territories of oil fields in Western Siberia as well as managing consequences of the oil spill accidents in Lithuania, Latvia and Byelorussia. During the last years we have cleaned up about 10 000 t/year of oil sludge from refinery containing up to 35% of the heavy hydrocarbons.
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Submission Detail Report

Landfall ID:	2162
Submission ID:	2161
Name:	Wolfgang Forster
Address:	3439 Compass Rose Dr. E.
City:	Jacksonville
State:	FL
ZIP Code:	32216
Phone:	904 731-8771
Email:	forwolf@aol.com
Name Brand Trademark:	does not apply
Manf. Name:	n/a
Manf. Address:	n/a
Manf. City:	n/a
Manf. State:	FL
Manf. ZIP Code:	n.a
Manf. Phone:	n.a
Dist. Name:	n/a
Dist. Address:	n/a
Dist. City:	n/a
Dist. State:	FL
Dist. ZIP Code:	n/a
Dist. Phone:	n/a
Describe Product:	Pure oxygen, (and possibly also oxygen/nitrogen mixtures) is a commercial product.
Principle Operation:	I am a retired chemist and would like to mention a possible disposal of oil sludge that is either on the sandy beach or floating on the water: one should be able to burn it if either pure oxygen gas, or a mixture of nitrogen and oxygen (where the oxygen content is over 50%)is blown onto the burning gunk. Straight burning in air would not work, because air contains only 21% oxygen and would not support combustion. Using 100% oxygen may make the combustion too vigorous.
Maturity of Tech:	probably has never been tried, but there is a chance that it may work
Field Tests:	no test done
Previous Applications:	to my knowledge, has not been tried
Is product commercially available:	Y

Availability of Technology:	don't know, but I believe that pure (liquid)oxygen is used for space shuttle launches
Vendor Manufacturer:	
Describe Special Handling:	
Company Name:	not a company, I am a concerned citizen